

FLIGHT

The
**AIRCRAFT
ENGINEER
AND
AIRSHIPS**

First Aero Weekly in the World.

Founder and Editor: STANLEY SPOONER

A Journal devoted to the Interests, Practice, and Progress of Aerial Locomotion and Transport

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CONTENTS

Editorial Comment	PAGE
The Pageant and Our Future in the Air	365
The Remedy	366
The Need for Making Air Mails Compulsory	366
The R.A.F. Aerial Pageant: Two General Views	367
The R.A.F. Pageant	368
German Air Legislation	373
Royal Aeronautical Society Official Notices	373
London Terminal Aerodrome	374
Air Ministry Notices	374
The Entler All-Metal Sporting Cantilever Biplane	375
In Parliament	376
The Royal Air Force	377
Personals	377
London-Continental Services	377
London Aero-Models Association	378
Imports and Exports	378

DIARY OF FORTHCOMING EVENTS

Club Secretaries and others desirous of announcing the dates of important fixtures are invited to send particulars for inclusion in the following list:

1922.

- Aug. 6-20 French Gliding Competition
 Aug. 6 Gordon-Bennett Balloon Race, Geneva
 Aug. 7 Aerial Derby Starting at Waddon
 Aug. 12 Schneider Cup Seaplane Race, at Naples
 Sept. Tyrrhenian Cup, Italy
 Sept. Italian Grand Prix
 Sept. or Oct. R.Ae.C. Race Meeting, at Waddon
 Sept. 22 Coupe Deutsche (300 kil.)
 Dec. 15-
 Jan. 2 Paris Aero Exhibition

1923.

- Dec. 1 Entries Close for French Aero Engine Competition

1924.

- Mar. 1 French Aero Engine Competition.

INDEX FOR VOL. XIII.

The Index for Vol. XIII of FLIGHT (January to December, 1921) is now ready, and can be obtained from the Publishers, 36, Great Queen Street, Kingsway, W.C. 2. Price 1s. per copy (1s. 1d. post free).

EDITORIAL COMMENT.

PART from its immediate interest as a splendid spectacle, the Royal Air Force Pageant, held at Hendon on Saturday of last week, took place at a very opportune moment, inasmuch as it centred public attention, already aroused by articles in the general Press—for which many thanks—and by questions in the House, upon the work of the R.A.F. The eighty thousand odd who witnessed the various demonstrations cannot fail to have come away filled with admiration for the perfect "craftmanship" of the pilots, the clockwork smoothness and regularity of the organisation, and the general air of absolute mastery which pervaded the whole demonstration. And at any rate a certain proportion of the visitors must have been forced to put to themselves the question: Have we enough of these splendid pilots, and have we sufficient machines of modern types upon which to mount them so as to give them the benefit of the latest technical developments. Unfortunately, the answer to both questions must be an emphatic NO.

As regards the number of pilots, a fair idea may be formed if it be remembered that at present we have at home a mere bagatelle of twelve squadrons, while our French Allies, devoting less time to "considerations" and more to action, will shortly have 240 squadrons. These facts hardly need elaboration. The very third-rate position into which a short-sighted Government has allowed us to sink should be obvious to the meanest intelligence. And it is not as if France were the only country to grasp the value of air power. Nearly every European nation is getting into the air—within the means at its disposal. In this connection, it should be realised that the air forms one of the cheapest known forms of armed force. Countries which could afford only the smallest Army and a Navy consisting of a few obsolete ships, can—and do—find the means to build up air forces which cost far less and are far more effective. Yet this great Empire continues to blindly pin its faith to the Navy—our first line of defence in the past, but no longer so, since the advent of aircraft. Were it not for the fact that we have the greatest confidence in the sound sense of the

general public, who will sooner or later force the Government to act—a promise of ten more squadrons is to be noted—the position would be intolerable.

On the second score, that of an adequate supply of modern machines, matters are, if possible, even worse. We have no fear of contradiction in stating that since the Armistice the number of machines—experimental or otherwise—of post-War type and design ordered does not reach 100. We would even go so far as to doubt if it exceeds half of that number. In the name of economy, the R.A.F. has had to be content with machines built during the War and “reconditioned,” or, at best, with designs got out during the War. The result is that we have practically no machines the performance, armament, and constructional details of which are not well-known to other powers—our late enemies included. There is another side to this absence of official encouragement: Not only are our pilots and gunners mounted on obsolete machines, but the aircraft industry, upon whose skill in designing we depend, has been allowed to dwindle until it is the merest skeleton. We would not for a moment, suggest that the aircraft industry should have been artificially maintained at its War-time strength, but we do most emphatically say that there is every prospect of our depleted industry becoming further attenuated by the closing down of some of our most important firms—if the half-promised reform is not immediately brought into effect.

The Remedy

If we had unlimited money to spend on armaments the remedy would be simple. But the country is not in a position to afford more than we are already spending. Nor, in our opinion, is that necessary. What is required is a re-allocation of votes. We are not among those who think that we should, even in its present form, abandon altogether the Navy for the Air. The day for such a drastic change is a considerable way off, although we should hesitate to say it will never come. But we do think that a full realisation of the change which aircraft has wrought in the position of these islands has not yet been really grasped by some of those in authority.

We would, therefore, again suggest that one remedy for the present highly unsatisfactory state of things lies ear-marking some of the Navy millions which are now being wastefully spent, and allocating them to the R.A.F. By so doing, we should be able to mount our pilots on machines worthy of their pluck and skill, and not on obsolete machines from the last war.

On the civilian side, upon which we must depend for reserves in machines and personnel, at any rate as far as bombing, troop-carrying and similar duties are concerned, it should not be necessary to ask for more taxpayers' money; it is only a matter, as has been hammered in, month in and month out, of sending *all* first-class mail by air. The volume would be such as to bring within sight the day when civil aviation could “fly by itself.” This year, the P.M.G. announced a surplus of something like half a million, and he already looks like having twenty times that amount in his next year. Why not devote the half million bagatelle to defraying the small extra charge that might be required to send all first-class mail by air? The public would thus not be asked to pay more, would get the benefit of rapid transit (for with sensible organisation, air mail *can* save time, the experience with the London-Paris line not-

withstanding), and would be helping to build up a reserve which might well at some future date mean the difference between safety and defeat. To derive full benefit from such a scheme it would be necessary to attack the problems Imperially, making full use of airships, seaplanes and aeroplanes. At present, we have specialised on the aeroplane at the expense of the other two types of aircraft.

A very great deal of propaganda work is necessary to convince the public that flying as passengers is safe. But when a man has been sending—compulsorily at first if necessary—his letters by air for a year or two at a greatly accelerated speed, it is fairly safe to assume that sooner or later he will decide to follow his letters into the air when making calls in person. Popularising passenger flying has been attempted, and has not proved a superlative success. Why not give the mails a real chance, and make passengers a secondary consideration?

The Need for Making Air Mails Compulsory

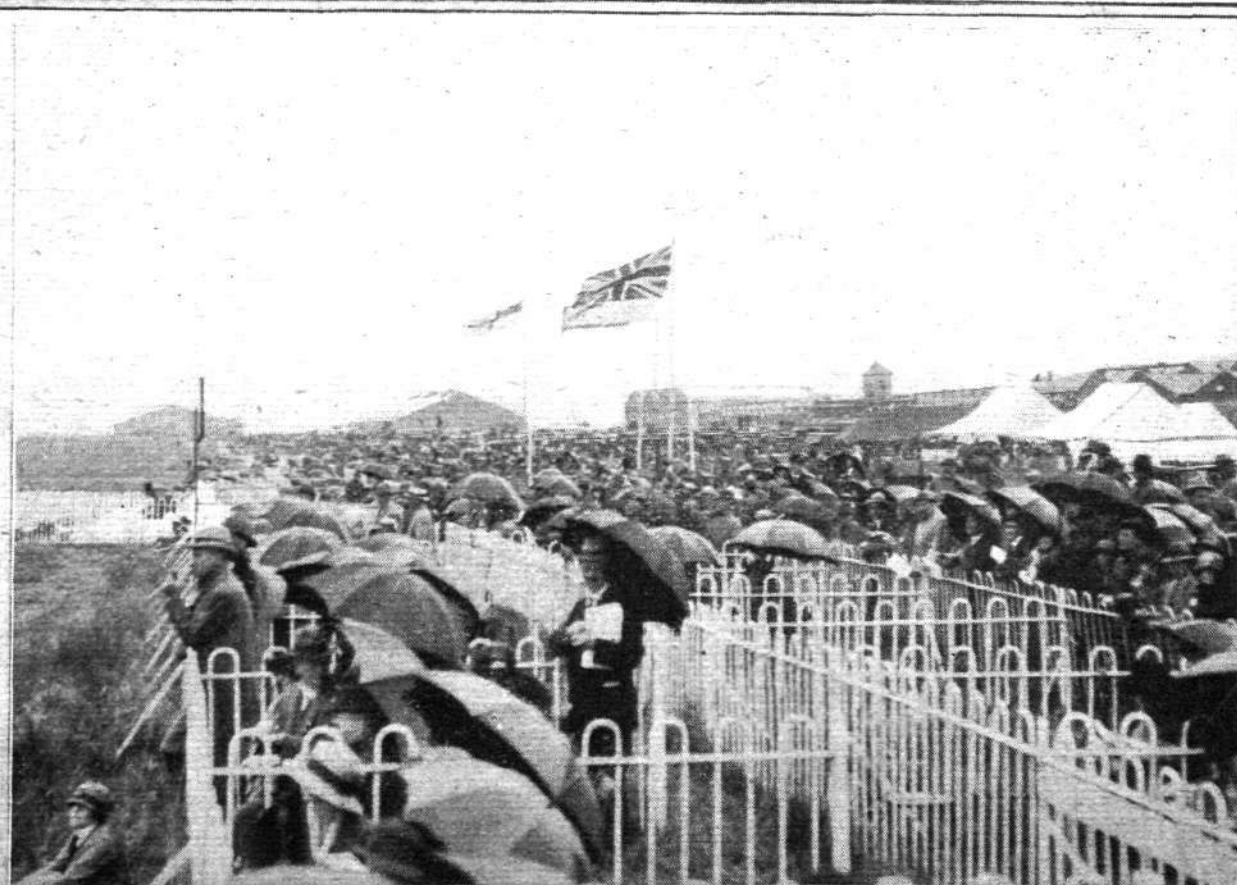
Against the carrying of mails by air on a large scale, it has been argued that the experience of the air mail on the London-Paris service has not been such as to encourage further expansion. While, on the face of it, this argument may appear sound, a brief consideration will show that the London-Paris route does not give a fair test. To begin with, the distance between the two cities—about 250 miles—is too short to allow full benefit to be derived from the higher speed of aircraft; the losses in time at the terminals form too great a percentage of the whole. If the routes were two or three times as long, the saving in time would then be very appreciable indeed. An excellent example of this is provided by the Cairo-Baghdad air mail, at present operated by the R.A.F., which might at some early period be handed over to private enterprise. As recorded the other day, a recent mail despatched from London reached Baghdad in eight days, as against the 29 days of the ordinary route. If such saving can be effected by the use of the air mail over a part only of the distance, what vistas it opens out in the elimination of space when mails are air-borne all the way.

The reasons for the present scant utilisation of the air mail between London and Paris are, as already mentioned, mainly the unsuitability of the route, and perhaps to an even greater extent the fact that, the mails forming such a negligible portion, instead of the bulk, of the load, machines have been kept waiting for passengers, when they ought to have been hasting across with the mails.

By making the sending of first-class mails by air compulsory, firms would be sure of a reasonably regular load, while the fact that no passengers were carried would often influence the pilots in the direction of fewer cancelled flights. When a pilot has the responsibility of a dozen lives, he might, quite rightly, hesitate to start under any severe weather conditions, whereas if he has only himself to think of, he will rarely refuse to fly. Thus strict regularity should be ensured. Our slogan should therefore now be: “Into the air with all first-class mails.”

The Aerial Derby.

It has been decided, after all, to make Waddon the starting point for this year's Aerial Derby, on August 7.



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THE R.A.F. PAGEANT: General view of the machines taking part, and below a glimpse of the great crowd in the enclosures—and the rain.

THE R.A.F. AERIAL PAGEANT

It was a thousand pities, after a period of remarkably fine weather—when we were all being warned about our dripping water taps, wasting of water, etc.—that Saturday last should have been chosen by the Powers—that be for the delivery of a plentiful supply of much-needed rain. After waiting so long for the latter, it might just as well have come a few days later. However, it is no use crying over spilt water, and after all, beyond a certain amount of personal discomfort, not very much harm was done, for the third R.A.F. Aerial Pageant was carried out at Hendon without a hitch, and not an item on the programme (excluding the sky-writing demonstration, which was cancelled the day before) was "washed out" in spite of the rain.

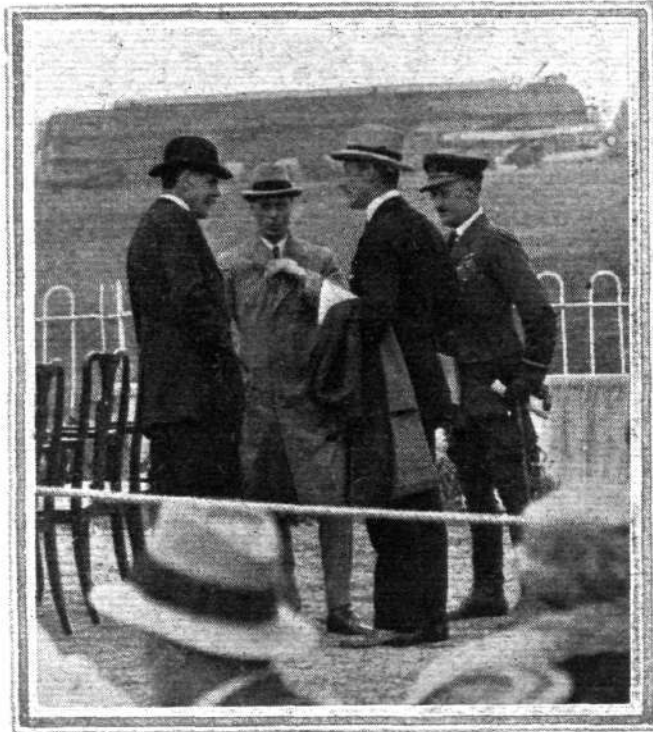
Although the early arrivals did not put in an appearance in such large numbers as on previous occasions, it was quite a big attendance that watched the exceedingly active preparations that were in progress between noon and the official opening of the proceedings. During this time, indeed, there was plenty to be seen in the way of trial flights, preliminary heats for the races to be flown later, and the parking of the hundred or so machines. Many famous squadrons were represented, such as No. 4 (France, 1914), No. 39 (Defence of London), and No. 100 (Night Bombing), whilst most of the pilots had equally famous war records to their credit. An aerial photographic competition was also held, between 12 and 3, in which certain points, previously indicated on a map, had to be photographed from a certain altitude, the winner being the pilot who got these points most nearly in

the centre of the negatives. The following stations were represented in this competition:—Netheravon (F/Lt. R. H. C. Usher, M.C., D.F.C.); School of Photography (F/O. V. E. Groom, D.F.C.); School of Army Co-operation (F/O. N. A. D'Aeth); Duxford (F/O. C. E. H. Allen, D.F.C.); Biggin Hill (F/Lt. C. T. Anderson, D.F.C.). The result of this competition was: Duxford, 1st; School of Photography, 2nd.

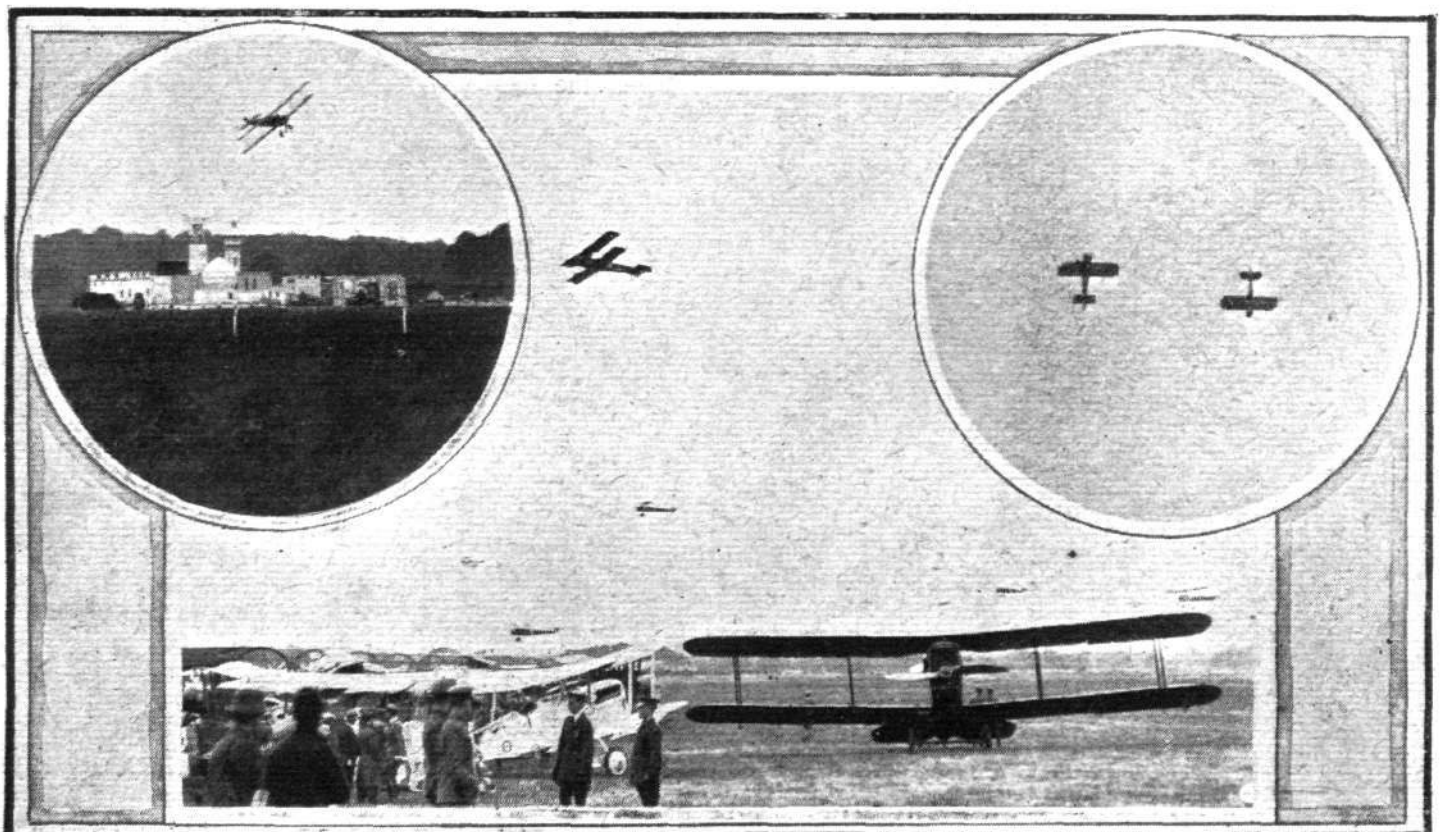
Just before 3 p.m. the enclosures began rapidly to fill with people and cars, until it looked as if the expected 100,000 would be reached in spite of the by no means promising weather outlook; rain had so far not fallen to any great extent. As a matter of fact, we understand the number of people present this year was round about 60,000! Of course this does not include the "outsiders," who congregated as usual on Hendon Hill and round about in large numbers.

The R.A.F. "Herald Angels" had no sooner announced the start of the first event, promptly at 3 p.m., than H.R.H. The Duke of York, K.G., Wing Commander, R.A.F., took his seat in the royal enclosure. He was accompanied by Capt. F. E. Guest, Secretary of State for Air. Among many other notable people present were ex-President Taft, Lord Gorell, Lord Cowdray, Lord Weir, Lord Hugh Cecil, Air Chief Marshal Sir Hugh Trenchard, Maj.-Gen. J. E. B. Seely, Gen. Sir S. Brancker, Air Vice-Marshal Sir Geoffrey Salmond, etc. We were also pleased to see very many old friends of the aviation world during the day.

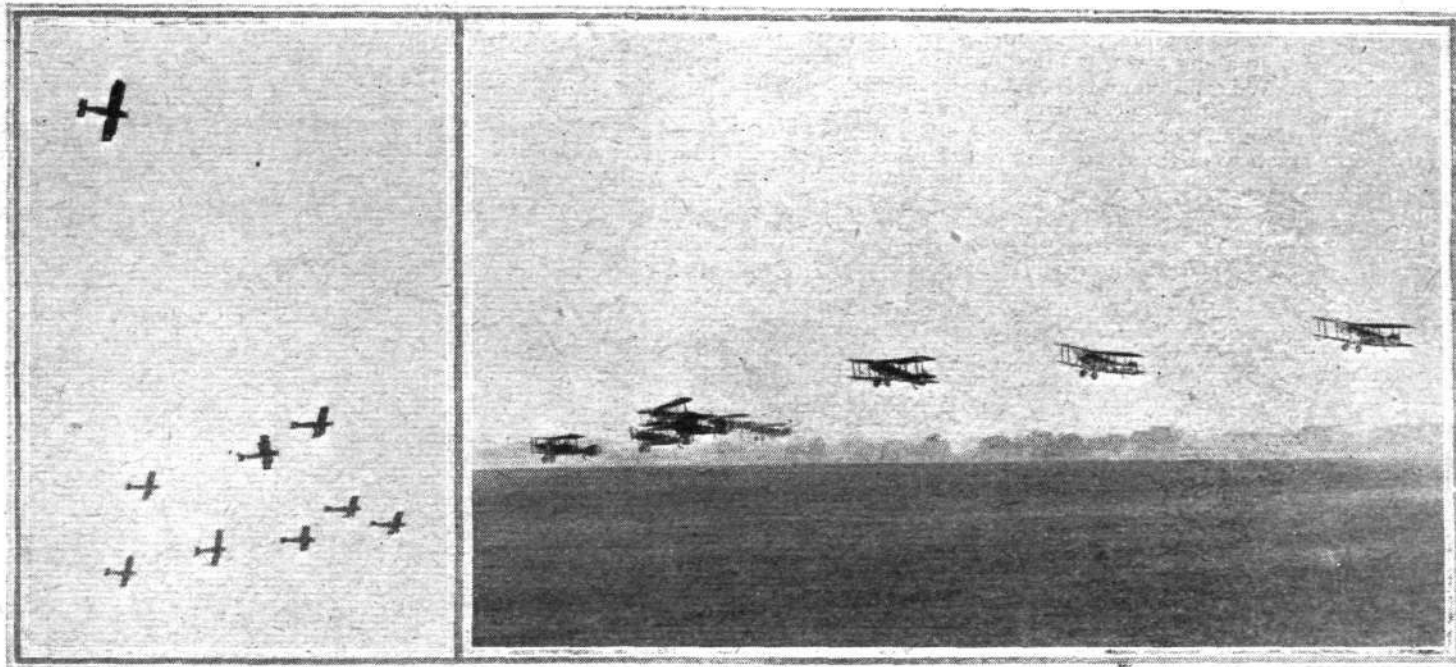
The first event was the Landing Competition, in which each



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AT THE R.A.F. PAGEANT: Group-Capt. H.R.H. The Duke of York in the Royal Enclosure, with Air-Chief-Marshal Sir Hugh Trenchard, Capt. the Rt. Hon. F. E. Guest, and Air-Vice-Marshal J. F. Higgins.



THE R.A.F. PAGEANT: Events 1, 2 and 3. Event 1 (left). Sideslipping into the "closed field." Event 2 (right). Exhibition Flying on two S.E.5a's, looping, etc. (Note the left-hand machine is just commencing to loop and the right-hand 'plane is on its back at the top of a loop.) Event 3 (centre). The Standard Avro Race; some of the 18 Avro 504's taking off.

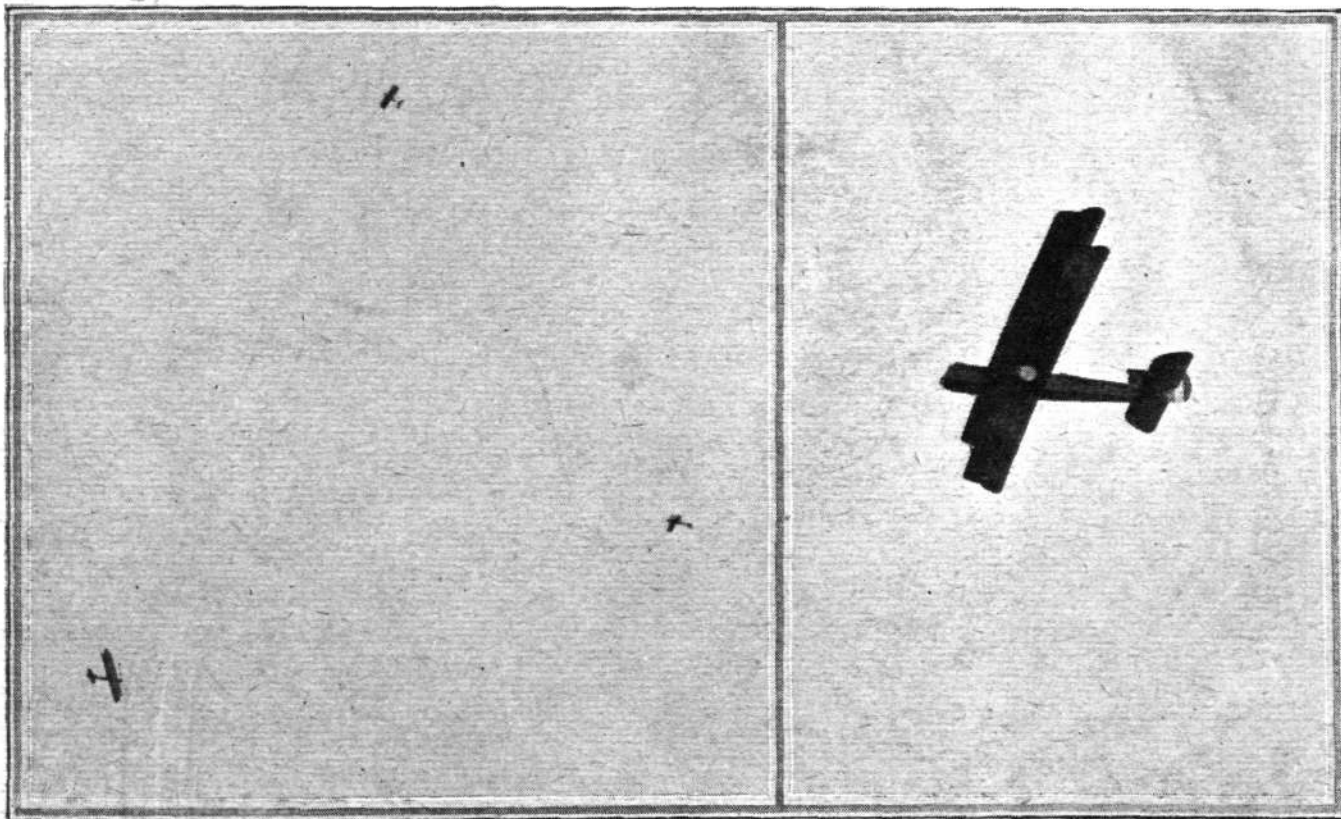


Formation Flying at the R.A.F. Pageant : A fine take-off in V formation by nine Bristol Fighters, and on the left the machines manœuvring again after an evolution for a new formation. "Flight" Copyright

competitor had to land in a "field" (marked out by a "hedge" of posts 4 ft. high) 100 yards square, having switched off his engine at an altitude of 1,000 ft. This was an exceedingly instructive event, and it was, perhaps, a pity that only three or four machines were to be seen competing in the final—the preliminary heats having been carried out earlier in the day—as here was an opportunity to witness some very skilful piloting. There was something spectacular about this event, too, especially for the man in the street, and it was quite exciting to see a machine side-slipping to earth with engine cut off and getting into alarming attitudes apparently out of control. F/O. R. H. Daly, D.S.C., D.F.C., of No. 100 Sqdn., Spittlegate, was first in this event, with a really beautiful landing with his "prop" stationary. F/Lt. J. F. A. Day, A.F.C. (Netheravon), was judged second best.

After this two S.E. 5's, piloted by F/Lt. P. W. S. Bulman, M.C., D.F.C., and F/O. E. R. C. Scholefield, D.C.M., ascended and were put through a truly remarkable performance of simultaneous stunting. Although the weather conditions somewhat hampered their movements, they nevertheless looped, rolled, spun, etc., together at what appeared to be only a few yards apart from each other. Then they separated and literally "gamboled like mad" all over the place, so that it was almost impossible to follow every movement. Their upside-down flying was particularly noteworthy.

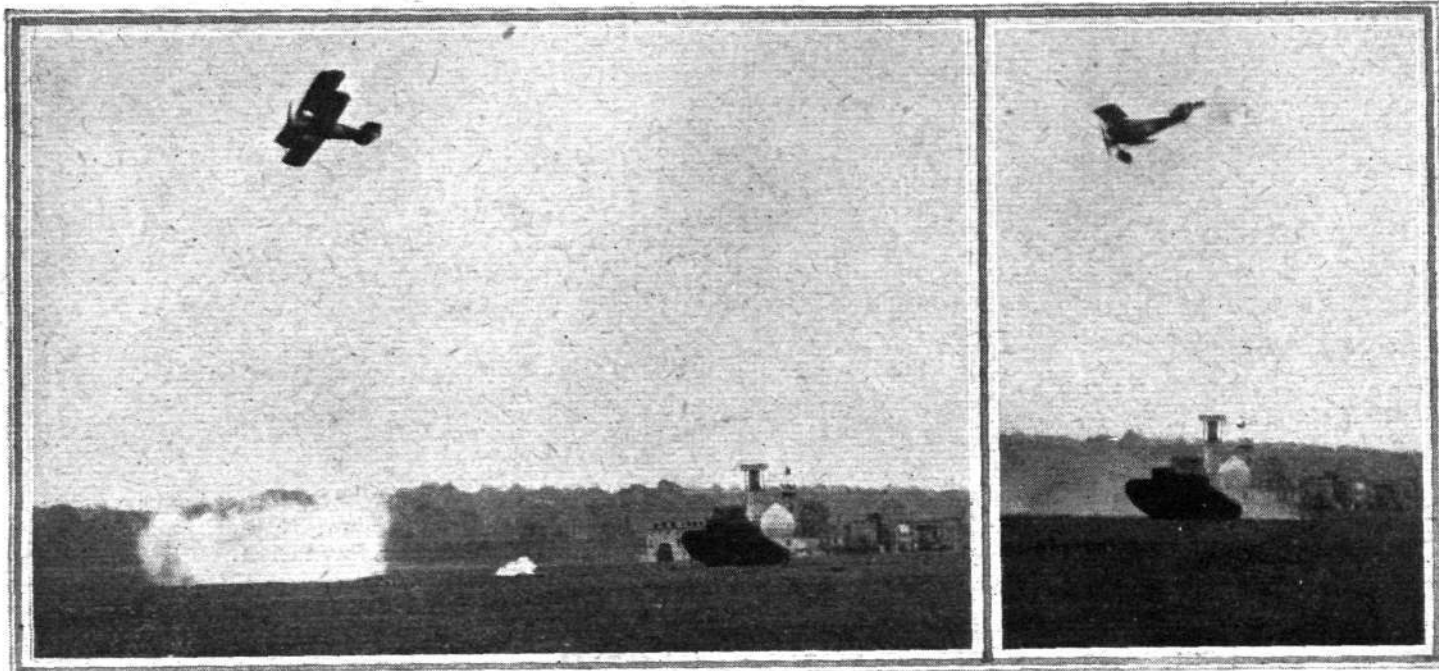
Item No. 3 followed immediately, this being the standard Avro Race for a Challenge Cup presented by the Secretary of State for Air. One competitor from each of 18 stations entered for this race, and in starting, on the signal being given, each pilot got into his machine, started his engine, and



An Aerial Combat at the R.A.F. Pageant : On the right the "Enemy" Bomber (a D.H.10 piloted by Squad.-Ldr. Roderic M. Hill, M.C., A.F.C.) arrives, and on left the two fighting S.E.5's attacking. Note the S.E.5 on the right hand turning on its back to meet the Bomber. "Flight" Copyright

took off. Practically speaking, they all started off together, and came bobbing along towards the enclosure like a flock of startled birds. We counted up to 14—then collapsed! Each station was distinguished by coloured flags on the rudder, but it was not particularly easy to sort them out. The old and well-known mystery of the dead donkey has always puzzled

An aerial combat between a D.H. 10 twin-engined bomber piloted by Sqdn.-Ldr. Roderic M. Hill, M.C., A.F.C., and two S.E. 5A's piloted respectively by F/Lts. P. W. S. Bulman, M.C., D.F.C., and D. W. Grinnell-Milne, M.C., D.F.C., was the next event on the programme, and it must be admitted that this was the best and most thrilling demonstration of

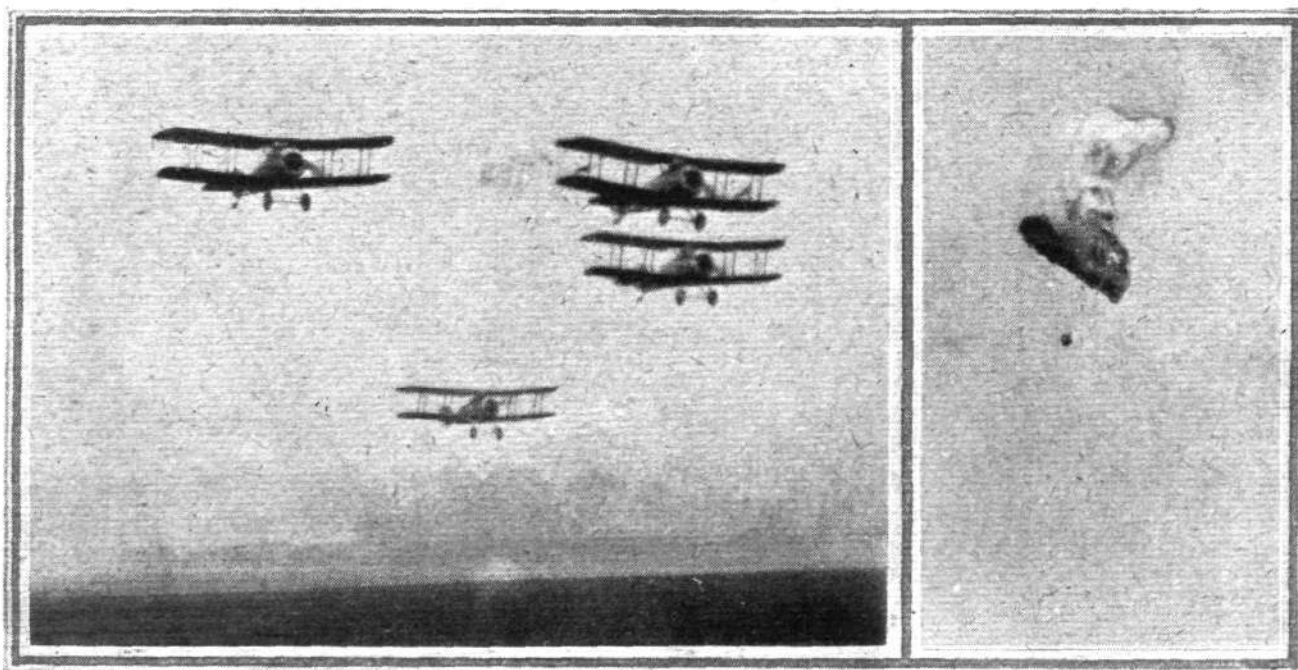


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BOMBING THE TANK AT THE R.A.F. PAGEANT: Near, nearer and, on the right, too close to be healthy.

one, but now we are given to wonder if anyone ever sees a defunct Avro 504. They seem to go on for ever. Having swarmed over the aerodrome sheds with a deafening roar, they made their way in a cluster towards the Welsh Harp, turned in a haze of rain, and made their way back to another turning point on the far side of the aerodrome, after which

aerial tactics ever presented. The manoeuvres of the two smaller machines were wonderful enough, but to see the larger, twin-engined 'bus looping, spinning and rolling out of tight corners with apparently as little effort as that required for the S.E. 5's, was certainly one of the events of the day. But even apart from the spectacular point of view, Sqdn.-Ldr.



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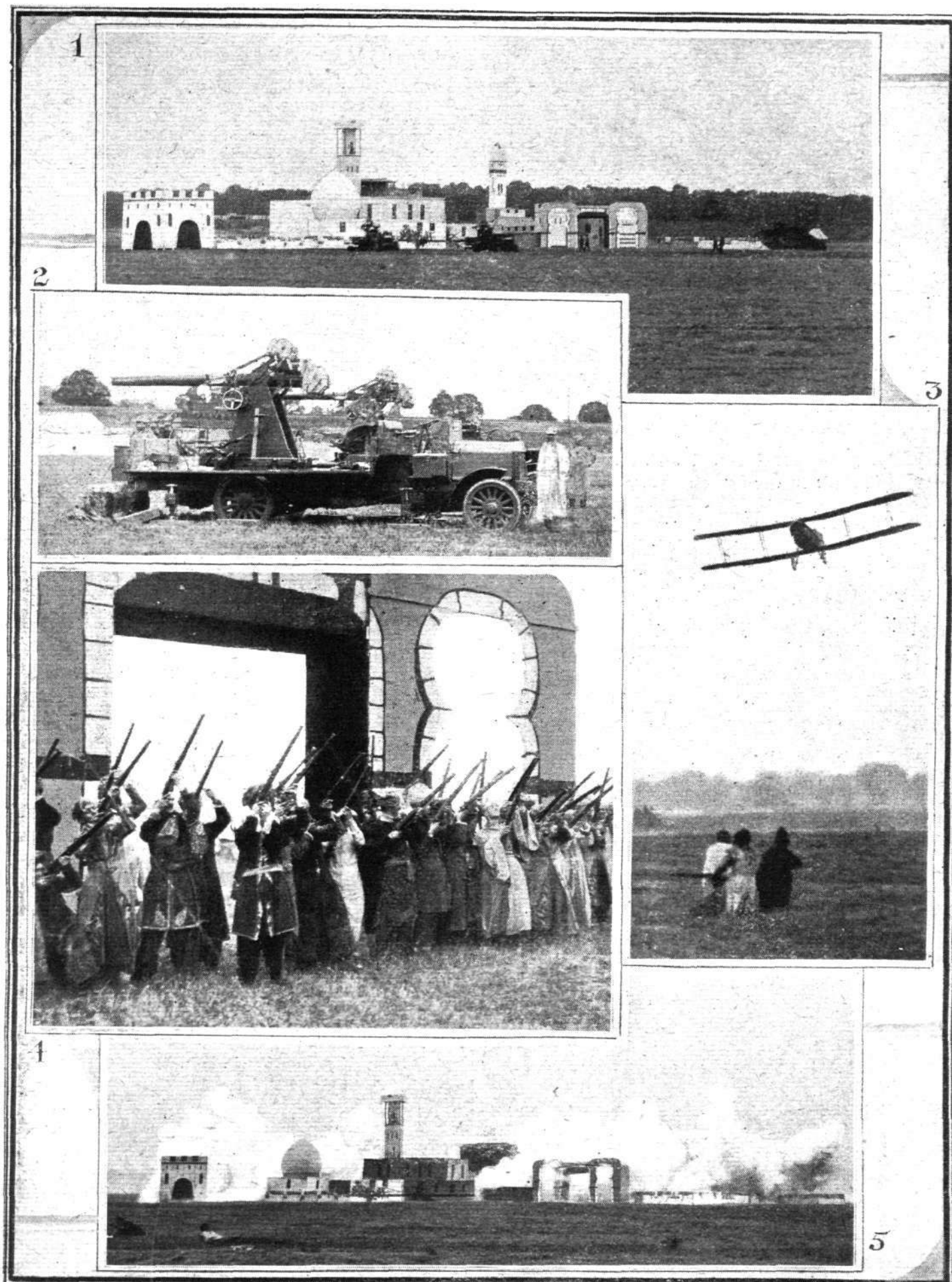
AT THE R.A.F. PAGEANT: Sopwith Snipes take off for the attack on the Kite Balloon, and on the right "Rupert" descends in flames after the attack.

they flew past the finishing line in front of the royal enclosure, having by then spread out, more or less.

There was a very good finish, Cranwell (F/O. P. Murgatroyd) obtaining the lead and crossing the line first, with Kenley (F/O. L. Hamilton, D.F.C.) close behind, and Henlow (F/O. F. Beaumont) third. Uxbridge (F/O. S. D. Macdonald, D.F.C.) and another, colours unreadable, both came in together very close behind third man.

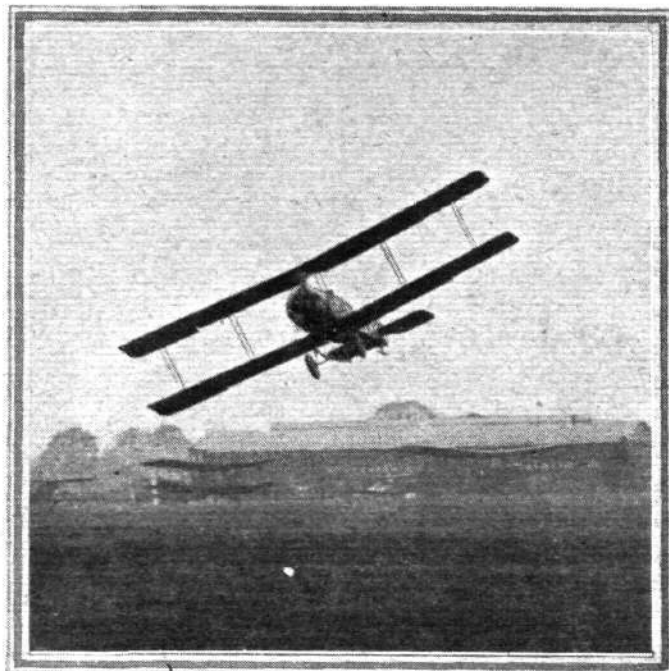
R. M. Hill's handling of the D.H. 10 was, in technique, an exceptionally fine piece of work—but then, of course, this was only to be expected, coming from such a pastmaster of scientific flying.

The next event was a handicap race, over the same course as before, and was a most interesting one inasmuch as about a dozen different types of machines took part. The machines and competitors were as follows:—



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AN EASTERN DRAMA AT THE R.A.F. PAGEANT: 1. The "Wottnott" stronghold before the raid. 2. The enemy anti-aircraft battery. 3. A trio of "Wottnott" defenders potting at an attacking bomber. 4. Massed "Wottnotts" defending the stronghold from an aerial attack. 5. The stronghold in flames.



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Crazy flying by Flt.-Lieut. W. H. Longton at the R.A.F. Pageant on an Avro 504k.

Type of Machine.	Pilot.
Avro 504	F/O J. A. McDonald.
Vickers Vimy	F/O. A. L. A. Perry-Keene.
Bristol Fighter	F/O. J. W. Baker, M.C.
S.E. 5 A. (150 Viper) ..	F/O. E. R. C. Scholefield, D.C.M.
D.H. 9 A. (450 Lion) ..	F/O. H. D. O'Neill, A.F.C.
D.H. 9 A. (400 Liberty)	F/O. C. Hallawell.
Martinsyde-Buzzard (300 Hispano)	F/O H. J. T. Saint, D.S.C.
Sopwith Pup (80 Le Rhone)	F/O J. S. Chick, M.C.
Westland Weasel (320 Siddeley Jaguar)	F/O. Wallwork, M.C.
Weasel (380 Bristol Jupiter)	F/Lt. A. H. Orlebar, A.F.C.
Avro-Aldershot-Condor	F/O. C. E. Horrex.
Sopwith Snipe	F/O. C. E. Maitland, D.F.C.

This race also provided an exciting finish, the Avro Aldershot (650 Rolls-Royce Condor), which was making its first public appearance, crossing the line first with the two Westland Weasels only a few yards behind—the Weasel-Jaguar being only slightly ahead of the Weasel-Jupiter. The Bristol Fighter came in fourth, and the S.E. 5 A. sixth, and then followed one of the D.H. 9's, the Avro 504, the Martinsyde, Snipe and Uncle Tom Cobley and all.

By this time the rain was beginning to fall in earnest, and during a short interval between events, H.R.H. The Duke of York made a tour of inspection amongst the machines, and was particularly interested in the Avro Aldershot. No. 24 Squadron (Kenley) then gave us a splendid demonstration of formation flying on Bristol Fighters. There were nine in the formation, as follows:—Sqdn. Ldr. E. H. Johnston, O.B.E.; F/Lts. J. M. Robb, D.F.C.; F. L. Luxmore; R. W. Chappell, M.C.; F/Os. M. L. T. Leroy, A.F.C.; L. Hamilton, D.F.C.; T. C. Traill, D.F.C.; and G. S. Oddie, D.F.C. The get-away was very impressive, in V-formation, and climbing in this figure they were soon in contact with the low-lying rain clouds, which must have interfered with their evolutions considerably. On several occasions one or more of the machines would be lost to view when the formation was changing into some new positions, yet they managed to keep together with a marvellous degree of accuracy. But the gem of the whole demonstration was at the conclusion, when they all made a simultaneous and perfect landing in V-formation.

The next item was the extraordinary exhibition of "crazy" flying, by F/Lt. W. H. Longton, D.F.C., A.F.C., on a jazzified Avro. Gusty wind and driving rain by no means rendered conditions ideal for this particular kind of flying, yet Lieut. Longton seemed to be able to make the old 'bus fly in every conceivable way it should not. Most remarkable, perhaps, was the way he flew three-quarter-side-on.

Meanwhile an Air Ministry "Safety" Tank (caterpillar type, *not* petrol) was being manœuvred into position ready for the next event—a competition for low bombing. This was carried out by four Sopwith Snipes, piloted by F/Lt. E. L. Howard-Williams, M.C.; F/Os. H. E. Walker, M.C., D.F.C.; C. E. Maitland, D.F.C.; and F. O. Travers, D.F.C. They had to dive down towards the Tank—which was supposed to be temporarily disabled—and drop bombs (practice type) on the poor thing. Each pilot was allowed three shots. With the exception of one bomb, which burst immediately at the stern of the Tank, the bombs all fell several yards away, and appeared to the onlookers as just a trifle wide. As a matter of fact, however, it should be noted that had they been "live" bombs, they fell sufficiently close to do considerable damage. This was quite an interesting event, and well worth elaborating for future occasions. Result: F/O. Travers, 1st; F/Lt. Howard-Williams, 2nd.

It was now just on five o'clock, the rain was settling down



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THE "AVRO" ALDERSHOT AT THE R.A.F. PAGEANT: This machine—illustrated in the last issue of "Flight"—is the latest "Hush-hush" production, and is fitted with a 650 h.p. Rolls-Royce "Condor." It won the Handicap Race, event No. 5.

in earnest, and it must be admitted that the writer began to feel the unequal degree of wetness, without *v.* within, rather acutely. Some hot tea and welcome shelter within one of the hangars was, therefore, most acceptable. From here it was not very easy to follow the next two or three events very closely, and the rain-mist made matters more difficult still. However, the Pageant carried on through it all, and, what is more remarkable still, the front of the enclosures remained well thronged with spectators to the bitter end—an extraordinary and highly satisfactory proof of the enthusiastic interest in aviation taken by the public.

After the low-bombing competition the Relay Race for the Duke of York's Challenge Cup (last holder, Kenley) was flown. One team, consisting of an Avro, Bristol Fighter and Snipe, from each of 12 R.A.F. stations, took part, each Avro flying over the course and handing over a message to the Bristol of its team, which in turn flew over the course and handed over the message to the Snipe. The latter completed its course and flew past the finishing line. Result:—

	Avro.	Bristol.
1. Kenley ..	F/Lt. W. Chappell, M.C.	F/Lt. J. M. Robb, D.F.C.
2. Halton ..	F/Lt. C. A. Stevens, M.C.	F/O. H. L. Rough, D.F.C.
3. Duxford ..	F/O. J. R. King .. Snipe.	F/O. W. E. Purdin.
1. Kenley ..	F/Lt. F. L. Luxmore.	
2. Halton ..	F/Lt. J. O. Compston, D.S.C., D.F.C.	
3. Duxford ..	F/O. F. Le P. Trench.	

F/Lt. Longton then ascended once again, and gave a demonstration of instructional stunting, as now forming a part of the normal training of a pilot. These stunts included the Loop, Half-Roll on top of Loop, the Half-Roll, Stalling Turn, Upside Down Flying, Stall and Vertical Dive, Sideslip, the Roll, Flat Turn, Vertical Slip, Vertical Spin, and Falling Leaf. Unfortunately these stunts were not seen to their best advantage under the prevailing weather conditions, the machine at times being almost completely hidden from view in the mist. It was, nevertheless, a wonderful display.

The attack on a kite balloon by a formation of Snipes was very effectively carried out this year. The balloon was enveloped most of the time in the misty clouds, out of which the attacking Snipe left its formation and swooped down on to its prey with a rattle of machine-gun fire. After several bursts of the latter, a tiny speck of flame was observed in the

side of the balloon. This was a signal for the observer, Maj. Sawdust, to make a graceful descent in his parachute. Immediately after, the escaping gas got well alight, and the balloon fell to earth a mass of flame and dense smoke.

Then followed the event of the day, an Eastern drama, depicting the attack and destruction of a desert stronghold. This was intended to illustrate the work that was done by the R.A.F. in the East. The "plot" of the drama was quite thrilling, and was well carried out by the "actors." A machine (Bristol Fighter) returning from a reconnaissance, had to make a forced landing near the stronghold, which opened a fierce attack on the disabled machine. The pilot of the latter had wirelessly for help, informing his squadron as to the position, etc. Fortunately an armoured car section, returning from a raid, happened to be near at hand, and rushed up to the rescue, keeping off, with heavy machine-gun fire, numbers of gaily clothed Wotnotts, who had emerged from the stronghold. After an interval of half an hour, lasting about two minutes, the bombing squadron arrived on the scene. The pilot of one of these machines landed alongside the disabled machine with a spare air-speed indicator, and soon put things aright. Both machines then got safely away. In the meanwhile the bombing squadron attacked the stronghold, under heavy fire from an enemy anti-aircraft battery, mounted on motor lorries, situated some distance away. The bombs soon began to take effect, and after a few salvos the stronghold was in flames, and the garrison was observed fleeing in all directions.

The programme concluded with an interesting demonstration, not without considerable pictorial effect, of the formation of an artificial cloud screen at about 1,000 ft. above the ground, by dropping smoke bombs from a Handley Page bomber. This is employed by attacking machines to screen them from anti-aircraft guns.

We cannot conclude without expressing our admiration for the wonderful organisation displayed throughout. Each event was carried out promptly to time and without the slightest hitch. The arrangements in the enclosures were splendid, and every effort was made to provide for the comfort of the visitors. The traffic arrangements, also, were well nigh perfect, a continuous procession of General 'buses, etc., dispatching the thousands of people to their various destinations with extraordinary speed. As we walked up Hendon Hill, damp but happy, we could not help repeating to ourselves over and over again, "Every year and in every way the R.A.F. Aerial Pageant gets better and better."

GERMAN AIR LEGISLATION

Decree Relative to Aircraft Construction

In our issue of May 18, 1922, we published an article dealing briefly with the text of the restrictions under which, as from May 5, 1922, Germany was permitted to build and use aircraft. These restrictions were, of course, those imposed by the "Committee of Guarantees," which has now replaced the Inter-Allied Aircraft Commission. In connection with them it is not without interest to examine what steps the German Government has taken to ensure that the regulations are carried out. A Decree dated May 5, 1922, has been issued by the German Government, from which we quote. On the construction of aircraft in Germany the decree states:—

"Every person engaging in the construction of aircraft must notify the Minister of Transport within 14 days of taking up the business. Every person engaging in the construction of or importation of aircraft material is bound, at the demand of the Minister of Transport and his agents, to give all information deemed necessary by the latter with respect to the said material.

"This information may be called for by public notice or by direct enquiry from the individual parties from whom this information is required.

"The Minister of Transport and his agents are authorised to examine the books, business letters and other documents in order to ascertain important data, and also to visit and search premises known or thought to contain objects or documents concerning which information is required.

"Apart from the official report and the duty of reporting any infringement of the law, the agents are bound to maintain secrecy with respect to installations and business relations

which come to their knowledge in the execution of their duties and to refrain from divulging or making use of business secrets.

"The constructor's or importer's statement and the results of investigations shall not be used for purposes of taxation."

On the use of aircraft in Germany, Article IV of the decree states: "Aircraft shall only be admitted to traffic in Germany on the condition that they fulfil the regulations in the appendix." (These conditions were dealt with in the article referred to.) Article V provides that aircraft which are constructed or imported in contravention to the regulations, or which are used in Germany in contravention to the regulations, shall, on the demand of the Minister of Transport, be brought into line with the regulations at the cost of the guilty party; in the case of refusal the Minister of Transport is authorised to take the necessary measures at the cost of the parties in question.

According to Article VI, "any person acting in contravention to the regulations will be punished with a term of imprisonment not exceeding six months, or with a fine not exceeding one hundred thousand marks. In addition to the penalty, the objects in respect of which the penalty is incurred may be confiscated, whether they belong to the guilty party or not. Confiscation may take place independently, even if no criminal proceedings can be taken against a given guilty party."

The decree is signed: "Berlin, 5th May, 1922.

"For the State Government,
"BAUER."

Abolition of the Canadian Air Board

An Act was passed by the Canadian House of Commons on April 27, 1922, by which the duties of the Canadian Air Board and of the Naval and Military Departments are to be taken over by a Ministry of Defence.

A Defence Council is to be set up which will consist of the Minister of Defence (President), Deputy Minister (Vice-President), a member who will perform the duties vested in the Deputy Minister of the Naval Service, and four other officers.

LONDON TERMINAL AERODROME

Monday evening, June 26, 1922.

THE total passengers during one day last week actually reached 50. Such a total, although common last year—in fact, twice that number was not at all out of the way—is something to marvel at these days, so great has the “slump” in traffic been. This sudden spurt, however, has not been maintained, and there is still no sign of any permanent increase. Mr. Fox, the prominent Paris booking agent, was over in London during the week, and put forward his own theory of the “slump” in airway travellers.

He told me that the great majority of American tourists are making straight for Central Europe. They leave the liners at Cherbourg, and, travelling by train to Paris, stay there only a few hours, and then catch the train for Vienna or Berlin. The trains to Vienna, he says, are packed with Americans daily, and, if they visit London at all, they only make a short stay, whereas last year they spent most of their time between Britain and France, travelling to and fro by air. The unfortunate accidents have also had much to do with the shortage of American air travellers.

Air Specials to and from Plymouth

SOME useful incidental business, however, accrues to air firms at times, and during the week the De Havilland Aircraft Co. and the Surrey Flying Services have been making hay out of the arrival of the Prince of Wales at Plymouth. Both these companies have had machines employed by various newspapers to bring photographs from Plymouth to London, and also to set out before dawn with newspapers containing these photographs for sale in Plymouth in the early morning.

With regard to the everyday delivery of newspapers in the early morning to Paris, Amsterdam, and now to Brussels—the last-named service starting on Monday—there is some danger that this valuable traffic may be lost to the airways owing to the irregularity with which the early morning machines run. The circulation manager of one big morning paper explained the situation to me so far as he was concerned. It appears that his paper has a large circle of regular subscribers in Paris who, in the pre-aeroplane days, got their London paper about 5 p.m. Now they get it some days at 9 a.m., when the aeroplane gets through; and, when the machine does not, the paper arrives at the same time as before—that is at 5 p.m. This uncertainty naturally upsets the subscriber, who wants to know why it happens, and the Paris staff of the paper in question have now to spend most of their time explaining matters to subscribers. In consequence, the directors of the paper have become of the opinion that it is better to deliver the paper regularly at 5 p.m. than to be early some days, and thereby make the reader discontented when it is late on a “dud” flying day. They are also finding that, even at the reduced rates now in operation, air transport is too expensive.

Perfection of Wireless Position-Finding

A VERY good example of the efficiency of the wireless position-finding now in operation on the airways was provided the other day, when Mr. Hinchliffe was flying from Paris to London on the Daimler D.H. 34. The weather in the Channel was bad, so before arriving at the French coast he climbed above the clouds and steered his machine by compass. When he calculated that he was well over the Channel, he asked Croydon for his position. After speaking for the necessary minute he was told that he was 12 miles north-west of Dover, and he then dropped down through the clouds, and, upon getting beneath them so that he could see where he was, found that the wireless people had given him his exact position. He tells me that the wireless is simply wonderful, and of incalculable help to pilots flying along the airways.

Mr. Alan J. Cobham brought over a new D.H. 34 for the Instone Air Line from Stag Lane on Friday, and proceeded to give demonstrations of getting off with full load. Whatever

difficulties other people may have in getting these machines off with full load, it is certainly easy as Mr. Cobham does it. With the tail well up almost immediately the machine started on its run, Mr. Cobham had the wheels off the ground, and the machine climbing steeply, within ten seconds of starting.

British Machines Competing at Brussels

THE Handley Page Transport have sent the latest of their W. 8's to Brussels to compete in the races at Evere aerodrome. One of the conditions of the competition was that the machine must arrive at Evere with a full load, and when the W. 8, piloted by Mr. MacIntosh, left for Brussels at 2.7 p.m. on Saturday, it carried as passengers Mr. and Mrs. Handley Page and Mr. Cogni, in addition to nine other passengers, all going to witness the competition. In addition to the competition for commercial machines, a series of races are being held during the week, and the Aircraft Disposals Co. have sent a number of machines, including three S.E. 5's and a Bristol, to compete. These machines will be flown by Messrs. Courtney, Foot, Stocken and Hayns.

The D.H. 9 which Capt. Norman Macmillan, accompanied by Major W. T. Blake and Lt.-Col. Broome, piloted from Croydon to Marseilles in his attempt to fly round the world, was apparently so badly damaged as to be considered unserviceable, and another machine has been got ready for this flight at the Aircraft Disposal Company's factory at Waddon. Capt. Rex Stocken left Croydon on this machine on Thursday at 9.10 a.m. in order to deliver it to the waiting aviators at Marseilles, and accomplished the flight the same day, arriving at Istres aerodrome, Marseilles, at 5.12 p.m., his actual flying time being 6 hours 2 minutes.

The Surrey Flying Services have now a new Avro fitted with a Renault engine in commission. This is the machine they built for Mr. Derwent Hall Caine, but which, for family reasons, he was unable to take delivery of. It is now to be used for special trips and for joy-rides at places other than Croydon. There is now too much work for the one Avro. Mr. Yule, who has been engaged for the last three years piloting machines in Norway, has joined the Surrey Flying Services as pilot, and will be in charge of the new Avro when it is away on joy-riding excursions. During the week-end Capt. Muir has been at Leighton Buzzard, taking up joy-riders in connection with a carnival that is being held there.

Record by the Daimler Airways

THE Daimler Airways have now run their services for a whole month with one machine, and, apart from occasions when adverse weather has interfered with all services, have maintained the constant regularity of their services. When it is considered that these consist of two return trips to Paris daily, with the exception of Sunday, when one return trip is run, it is possible to get some idea of this triumph of organisation and mechanical achievement. The total mileage run by this one machine in the month is just on 21,000—a figure which constitutes a record for any form of transport vehicle. During this time the engine has only been changed once, although all sorts of adjustments and replacements have been made to the machine during the hours of darkness. Great praise is due to Mr. Sergeant, who is in charge of the mechanical side of the Daimler sheds, for this remarkable performance.

On Sunday Handley Page Transport ran a one-day excursion to Paris for the Grand Prix. One of their W. 8's left the aerodrome at 9.15 a.m. with a full load of excursionists, and late in the evening—the aerodrome lighting being requisitioned—this W. 8 duly returned from the French capital, followed by an 0-400, a spare machine in Paris, which had been drawn upon to accommodate an overflow of traffic. Grand Prix photographs arrived for London newspapers on these return machines, and there was an exciting rush to get them through Customs and up to town in time.

NOTICES TO AIRMEN

Aerodromes for Civil Use : Amendments

It is notified Notice to Airmen No. 35 of 1922 (Consolidated List of Aerodromes) is amended as follows:—*List C., Licensed Civil Aerodromes.*—The following should be added:—Alva, King o' Muirs Farm; Cupar, Hilton of Carslogie Farm; Kincardine, Toll Road.

(No. 60 of 1922.)

Shoeburyness : Flying of Kite Balloon

It is notified:—

A Kite Balloon is flown daily at the Meteorological Station, Great Wakering, 2 miles N.N.E. of Shoeburyness (Lat. 51°

32' N., Long. 0° 49' E.) for the purpose of making meteorological observations.

The balloon is normally flown at a height of, approximately, 10,000 ft. The cable is marked with red and white streamers.

Pilots flying in the neighbourhood of Shoeburyness should keep a careful lookout, as the balloons and mooring cable constitute a danger to aircraft.

N.B.—Attention is drawn to Notice to Airmen No. 51 of 1922, warning pilots of the existence of a danger area across the mouth of the Thames, extending from Yantlet (Isle of Grain) to Foulness Sand and passing close to Shoeburyness.

(No. 61 of 1922.)

THE ENTLER ALL-METAL SPORTING CANTILEVER BIPLANE

THE aeroplane shown in the accompanying illustrations is the product of a newcomer to the German aircraft industry—the Entler-Werk, Wilhelmshaven. It is designed by Herr Victor Entler, of Bremen, who was formerly with the Junkers, Sablatnig and Hansa-Brandenburg firms. The first series of this small biplane is in the production stage, and will be produced both as a single-seater and a two-seater.

The power plant fitted varies, according to the customer's own choice. Amongst others, Mr. Entler hopes to fit the 40 h.p. Green engine in these machines. The 'plane itself is sold in Germany for 250,000 marks and in Great Britain for £220, with two years' guarantee. With the present engine installation, a 30 h.p. twin-opposed Haacke engine is fitted.

The Entler biplane has not yet been tried out in the air to its full capacity, but it has been designed for 10 hours' non-stop flying capacity. So far a speed of 65 m.p.h. has been attained with the 30 h.p. engine. It will be noted that the wheel shaft of the undercarriage is made in two parts, and that the rudder, divided elevators and the *ailerons*—which are fitted to the top plane only—are unbalanced. Both the

upper and lower planes are one-piece jobs that can be mounted and removed quickly and easily. The petrol tank is fitted inside the top plane. The control of the *ailerons* is by means of duralumin rods and cables.

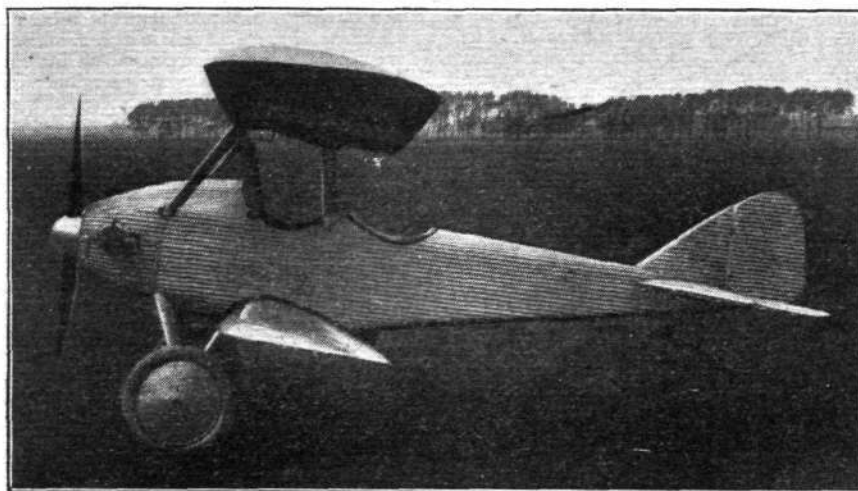
The interior structure arrangement of this little machine has been patented by the designer, but beyond that no further information is available at the moment. The external construction does not differ in appearance from that of the Junkers aircraft.

It must be admitted that the Entler Sporting biplane possesses a pleasing appearance, and we await with interest further news of this "novelty."

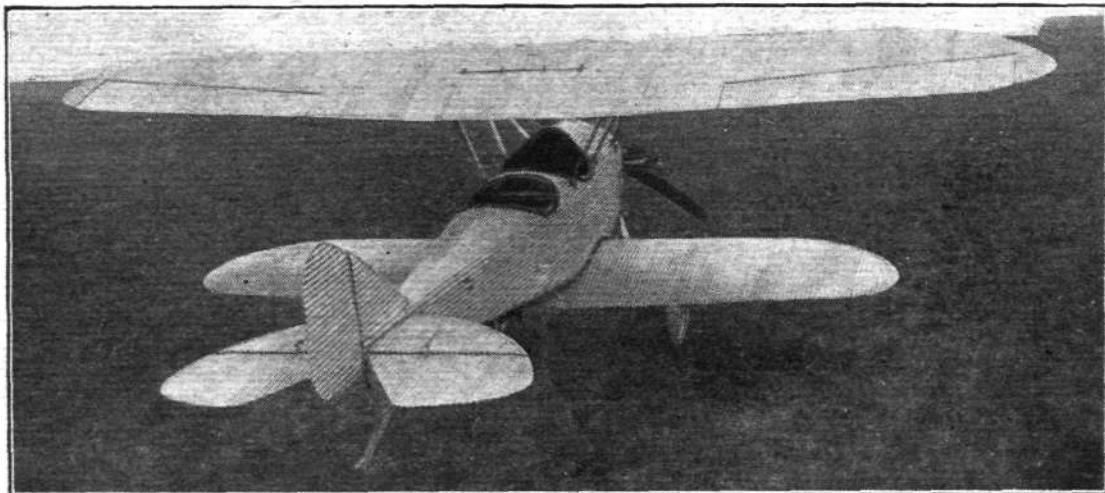
The principal characteristics of this machine are:—

Span (top)	23 ft. 0 ins.
Span (bottom)	19 ft. 6 ins.
Chord (top), 4 ft. 0 ins.; (bottom)	3 ft. 3 ins.
Gap	3 ft. 11 ins.
O.A. length	16 ft. 9 ins.
O.A. height	7 ft. 9 ins.
Area, main planes	150.6 sq. ft.
Weight, empty	375 lbs.
Designed speed	80 m.p.h.

THE ENTLER ALL-METAL SPORTING BIPLANE: Side view of the latest German effort. The engine is a 30 h.p. Haacke.



The Entler All-Metal Sporting Biplane: Three-quarter rear view. Externally it is similar to the Junkers construction, but differs considerably in its internal construction.



Honouring Sir James Stevenson

FOLLOWING a luncheon last week at the Savoy Hotel, Sir James Stevenson was presented with a silver salver inscribed as follows:—

"Presented to Sir James Stevenson, in recognition of his services to British aviation by his colleagues on the Air Council, February, 1919–October, 1921."

The salver bore the signatures of present and past members of the Air Council.

Irish Free State and Aviation

A SECOND aeroplane for the Irish School of Flying, about to be established at Baldonnell, has, according to the *Derry Journal*, arrived in Dublin. It is an Avro machine, and was brought to Dublin by the British and Irish steamer "Lady Cloe." As the steamer came up the Liffey, an Irish military guard went aboard to take charge of the aeroplane. It is understood that the Irish Air Council expect to have the School of Aeronautics at work in a short time. The delay in all branches of Irish reconstruction resulting from the controversy of the last six months has held up the organisation of the new

air services, both military and civil. The Irish Air Council expect to be able to push on this work immediately and begin the training of Irish airmen.

Aircraft for Exploring the Antarctic

BESIDES diamonds, edible fish in solid masses, 100-fathom marine trees, and other wonders of the Antarctic, from a report by Major Carr, who accompanied the "Quest" expedition to attend to the aviation side of the undertaking, it is his opinion that the opportunities for aerial work in the Antarctic Zone are wonderful. Unfortunately, owing to a change of plans, the baby seaplane and balloon sent to Cape Town for the "Quest" were never embarked. If the explorers had been able to climb to a good height and fly one hundred miles farther south they believe that they would have sighted new land.

The weather conditions were very wonderful, the air being clear as crystal and the mirage remarkable. Major Carr believes there are great possibilities for aviation work in Polar regions, and he regards seaplanes as indispensable for successful exploration.

IN PARLIAMENT

British Air Power

MAJOR-GENERAL SEELY on June 20 asked the Prime Minister whether his attention has been called to the fact that the reserve for the Royal Air Force to be provided by civil aviation has almost entirely disappeared, and that as a consequence our defensive power in the air has fallen to a dangerously low level in comparison with other countries and in relation to the other arms of our own service; and what action he proposes to take in the matter?

Mr. Chamberlain: My right hon. and gallant friend may be assured that His Majesty's Government are alive to the bearing upon national security of the developments of aviation in all their various aspects, and are giving the present position their very careful consideration. It must not, however, be taken to indicate that our defensive power is necessarily dependent to more than a limited degree upon the condition of civil aviation.

Major-General Seely: What action is the Government really taking now, apart from consideration, in view of the deplorable situation in which we stand in the air relatively to other Powers?

Mr. Chamberlain: It is generally held, I think, that consideration should precede action.

Major-General Seely: But consideration has proceeded for two years, and this is the result: I ask what action is now being taken after two years' consideration?

Mr. Chamberlain: I can give no further answer. I do not profess to be conversant with the details, but what I do know is that the position as a whole, and the serious questions involved, are under consideration at this time. Beyond that I cannot go. If my right hon. and gallant friend desires further information, apart from broad policy, I shall be obliged if he will put a question down.

Major-General Seely: I will do so for Thursday to the Prime Minister.

Foreign Aircraft

MAJOR-GENERAL SEELY asked the Secretary of State for Air if he can state the approximate number of civil aircraft of value for war purposes now available in the principal European countries and in the United States of America?

Captain Guest: The numbers of civil aircraft borne on the French, Belgian and Dutch registers on May 1 were 598, 39, and 15 respectively. In the absence of any authoritative statement by the Governments concerned, it is impossible to say what proportion of these aeroplanes would be of value for fighting or war-training purposes, but it is probable that the number fit for modern warfare would be small. As regards Germany, 225 aeroplanes were, on May 1, available for air traffic, but none of these would be of value for war purposes. As regards America, the estimated number of civil aircraft in operation in 1921 was 1,200. Of these, approximately 600 were employed by civil air transport companies.

Aeroplanes, Pilots and Wireless

SIR HARRY BRITAIN, on June 22, asked the Secretary of State for Air the number of foreign-owned passenger-carrying aeroplanes trading between their own country and England which carry only a single pilot; what number are not yet fitted with wireless; and whether he can give approximate dates on which these essential improvements are to be remedied?

Captain Guest: The answer to the first question is 71 aeroplanes, of which 10 will eventually be replaced by aeroplanes fitted with dual control capable of carrying two pilots; to the second, 65; to the third, that it is expected that all these aeroplanes will be fitted with wireless apparatus within the next three months.

Trans-European Air Routes

MR. L'ESTRANGE MALONE asked whether any steps are being taken to establish British air routes on any European routes other than the little cross-Channel routes London-Paris, London-Brussels, etc.; whether definite steps are being taken to establish British air routes on the important trans-European routes where French, German and Italian aircraft are already operating; and, if not, why not?

Captain Guest: The answer to the first question is that it is proposed to establish a new subsidised air route with flying boats from Southampton to Cherbourg and probably later to the Channel Islands; to the second that, except as stated above, no additions to the existing subsidised aeroplane services are at present contemplated, though these routes may be extended under the present subsidy scheme within the limits of the money available; to the last, that the Ministry has up to the present received no applications from any British firm to establish a British air line on the trans-European routes.

Mr. Malone: Is the right hon. and gallant gentleman aware, now that Germany is allowed to build aircraft, that German aircraft will be ahead of the English?

Captain Guest: I think it must be apparent to my hon. friend that European countries have a considerable advantage over us in this connection.

London-Paris Route Equipment

MR. L. MALONE asked whether any complaints have been made to the effect that the facilities as regards terminal aerodromes, landing grounds en route, wireless communication, fog reporting, etc., on the London-Paris route are inadequate; whether any representations have been made to the French Government to improve the wireless facilities on the French side of the London-Paris route, or what is the delay in establishing efficient communication; and whether the Air Ministry will consider setting up stations for reporting the width and altitude of fog banks on the route and otherwise dealing with the complaints made against this route?

Captain Guest: The answer to the first question is that some vague complaints, especially in regard to the French portion of the route, have been received, but, with two exceptions, none of them has been sufficiently concrete or definite to enable action to be taken on them. The two exceptions related to the defective condition of the surface of Croydon aerodrome (which steps have been taken to remedy), and to delays in wireless communication between Croydon and Paris, mainly traceable to atmospheric disturbances and in a less degree to mistakes by personnel. As regards wireless communication on this route generally, I would refer my hon. friend to my reply to him of May 4 last. That reply is also pertinent to the second question, the answer to which is in the affirmative. The delays in establishing efficient wireless communication on the French side of the Channel are due to the time necessary to reconstruct their W/T stations, but we are informed that this work is being pressed forward. As regards the last part of the question, experiments are in hand for finding a practical method of determining the vertical extent of fog, and the suggested establishment of new stations for this purpose additional to the existing five—namely, three on the 58-mile route from Croydon to the coast, reporting weather conditions every hour during daylight, and two reporting the conditions over the Channel—is not considered necessary.

Mr. Malone: Has the right hon. and gallant gentleman actually interviewed some of the pilots about these complaints in the first part of the question; and if not, will he do so?

Captain Guest: I will certainly put myself in touch with the companies, and ask them to inform me of what are the view of their pilots.

Thames Air Station

MR. GILBERT asked whether any further progress has been made as to providing an air station on the Thames in the vicinity of Westminster and Vauxhall bridges; whether it has been definitely decided to establish such a

station; when it is proposed to use it for a Continental air service; and can he make any general statement on the subject?

Captain Guest: Negotiations have been steadily pursued with a view to carrying out the series of experimental flights to and from the Thames at Westminster referred to in the reply I gave my hon. friend on February 22 last. These have, however, not borne fruit, and I regret, therefore, that I have nothing to add to my previous statements.

Air Service to India and Australia

COMMANDER BELLAIRS asked the Prime Minister, in view of the importance of the proposed airship service to India and Australia, whether he can hasten the consideration and decision of the Imperial Defence Committee?

Mr. Lloyd George: The question of the proposed airship service to India and Australia will be considered at an early meeting of the Committee of Imperial Defence.

R.A.F. Pilots and Skilled Workmen

SIR H. BRITAIN asked the Secretary of State for Air whether he can make any statements as to what is being done by his Department to retain a sufficiency of skilled pilots; and whether he is also giving attention to the necessity of having available an adequate number of trained engineers and skilled workmen to deal with the manufacture and upkeep of aeroplanes, bearing in mind the needs of the future?

Captain Guest: The Short Service Commission scheme which was instituted in 1919 will provide a regular flow of qualified pilots into the Reserve. Under this scheme commissions are granted for four years' service in the flying branch of the Regular Air Force, followed by four years in the Air Reserve. A number of these short service officers will pass to the Reserve in a few months time. Skilled men who have served in the ranks as fitters, riggers, etc., are also passing into the Reserve, and will be available for service in connection with the upkeep of aircraft in a national emergency. As regards manufacture, it is the policy of the Air Ministry to support aircraft constructors to the utmost extent compatible with the needs of national economy.

SIR H. BRITAIN: Realising that the right hon. gentleman appreciates as much as anybody else the urgency of this question, and the impossibility of improvisation, can he say what the Ministry is prepared to do in the case of British plants having to close down while this lengthy consideration is going on?

Captain Guest: That is too important a question to answer by way of reply to the supplementary question.

SIR W. JOYNSON-HICKS: In regard to the personnel, is the right hon. and gallant gentleman satisfied that the flow of pilots and mechanics is sufficient in view of unforeseen contingencies?

Captain Guest: I think the annual flow of pilots will rise to about 500, and of mechanics probably to 2,000.

Naval Wing of R.A.F.

CAPTAIN VISCOUNT CURZON asked the Prime Minister whether the Committee appointed to enquire into the position and work of the Naval Wing of the Royal Air Force has held any meetings as yet; when it is likely to conclude its labours; whether any Report will be issued; and whether the serious lack of machines and pilots for work in conjunction with the fleet has received the consideration of the Government?

Mr. Lloyd George: The reply to the first part of the question is that no Committee was appointed to consider the position and work of the Naval Wing of the Royal Air Force. A Committee was promised by the Leader of the House to examine into the system of naval and air co-operation. No formal meeting of the Committee has yet been held, but some progress has been made by preliminary exchange of views. The reply to the second part of the question is that I am unable to say when the Committee is likely to conclude its labours, and to the third part that a report will be rendered to the Committee of Imperial Defence of which this is a Sub-Committee. With regard to the fourth part of the question, I am not aware of any serious lack of machines or pilots for work in conjunction with the Fleet, and air training in co-operation with the Navy is being actively and efficiently carried on with the limited forces at our disposal.

Status of Secretary of State for Air

MR. L. MALONE asked the Prime Minister whether, in view of the present and increasing importance of the Air Force, His Majesty's Government will consider raising the status of the Secretary of State for Air to the same as that held by the First Lord of the Admiralty and the Secretary of State for War?

Mr. Lloyd George: I am not prepared to propose an increase in the salary attached to any post in the Government at the present time, nor do I think it expedient to add to the numbers of the Cabinet.

Mr. Hogge: This does not necessarily depend upon the amount paid to the Minister. Is the Prime Minister aware that the Secretary for Scotland does more work than any other Minister in the Cabinet?

Mr. Lloyd George: That is the only difference of which I know.

Captain Wedgwood Benn: In view of the importance of the Air Service, should it not receive equal recognition in this respect with the other two arms of the Service?

Commander Bellairs: If you take the First Lord of the Admiralty and the Secretary of State for War out of the Cabinet that would put them all upon an equal basis.

Air Power

SIR W. JOYNSON-HICKS asked the Prime Minister whether he has received a letter, dated June 2, from the Parliamentary Air Committee; and what action the Government proposes to take in regard to the air position?

Major-General Seely asked the Prime Minister if he will take steps to ensure that our safety in the air shall receive full consideration relatively to our other defensive services?

Viscount Curzon asked the Prime Minister whether the Committee of Imperial Defence has considered the adequacy or otherwise of the provision for the air defence of the country; if so, what is their decision; whether the same Committee has considered the adequacy or otherwise of the arrangement made and the provision for aircraft working with the Royal Navy; and, if so, whether the Dominions were represented at such deliberations and if they concur in the conclusion reached?

Mr. Lloyd George: Yes, Sir. I have received the letter in question. Long before this letter was written the attention of the Government had been directed to all the questions of aerial defence and development to which it refers, and a special sub-committee of the Committee of Imperial Defence had been appointed to consider and report upon the general question which is now before the Committee of Imperial Defence. The arrangement for aircraft working with the Royal Navy is being considered by a separate committee.

SIR W. JOYNSON-HICKS: Having regard to the very great importance which I know my right hon. friend attaches to this question, may I ask whether there is any possibility of him being able to make a statement in the approximately near future?

Mr. Lloyd George: The letter, I agree, contains some very impressive passages, and the Committee are examining the whole problem very closely. I think it would be a great mistake to be in a hurry to insist upon a report, because there are a good many considerations which must be taken into account.

THE ROYAL AIR FORCE

London Gazette, June 16, 1922

General Duties Branch

The date of effect of the commns. of the following Flying Officers is May 25, and not as Gazette, June 6:—A. W. Crees, R. M. Taylor, M.C.

London Gazette, June 20, 1922

General Duties Branch

Pilot Offr. R. E. Baugh to be Flying Offr.; April 20. Flying Offr. B. Ankers, D.C.M., is restored to full pay from half-pay; April 1 (substituted for Gazette, May 5). Flying Offr. F. L. Pearce to take rank and precedence as if his appt., as Flying Offr., bore date Oct. 13, 1918, immediately following Flying Offr. R. L. Cattle. Reduction to take effect from June 7. Flying Offr. T. B. Tully, A.F.C., resigns his short service commn., and is granted rank of Capt.; June 21.

Stores Branch

Flying Offr. T. C. James is granted a permanent commn., retaining his

present substantive rank and seny., and is transfd. to Stores Branch; May 15.

London Gazette, June 23, 1922

General Duties Branch

Air Commod. E. A. D. Masterman, C.M.G., C.B.E., A.F.C., is placed on half-pay, Scale A; June 10. Flight Lieut. A. H. Wann is restored to full pay from half-pay; June 16. Flying Offr. F. McQuistan, D.F.C., is removed from the R.A.F.; March 20.

Stores Branch

The name of Flight Lieut. Henry Sam Francis Temple Jerrard will be as now described, and not "Henry Vaughan Jerrard," as stated in previous Gazettes.

Memorandum

Hon. Sec. Lieut. G. C. Wright relinquishes his hon. commn. on joining the Territorial Army; May 29.



Married

Major CUTHBERT D. FELLOWES, M.C., A.F.C., second son of Rear-Admiral Sir T. H. B. Fellowes, K.C.B., D.L., of Stevenage, Herts. was married very quietly on June 22 at St. Nicholas' Church, Stevenage, to MARGARET BOGLE, widow of Lieut.-Commander DONALD OSWALD, Royal Navy, second daughter of the late Gilbert W. Don, Esq.

Flight Lieut. CRESSWELL TURNER, A.F.C., R.A.F., only son of Mr. and Mrs. J. Turner, of Edgbaston, Birmingham, was married on June 14, at St. Saviour's, Eastbourne, to NORAH ETHEL, elder daughter of Mr. and Mrs. H. RAY-ENGLEHEART, of Blackwater Road, Eastbourne, and granddaughter of the

late Lieut.-Col. A. B. W. Sleight, H.M.'s 77th and 2nd West India Regt.

The marriage arranged between Major JAMES DUNDAS-GRANT (late R.A.F.), younger son of Sir James and Lady Dundas-Grant, and Miss KATHERINE GALLOWAY, younger daughter of Sir James and Lady Galloway, took place on June 24 at All Saints', Margaret Street.

To be Married

The marriage arranged between JOHN VAUGHAN ROBERTS, R.A.F., and MARY CONSTANCE, daughter of Brig.-General and Mrs. J. H. LLOYD, of Queensbridge, Ellesmere, will take place quietly on July 4, in Ireland.

THE LONDON-CONTINENTAL SERVICES

FLIGHTS BETWEEN JUNE 18 AND JUNE 24, INCLUSIVE

Route†	No. of flights*	No. of passengers	No. of flights carrying		No. of journeys completed†	Average flying time	Fastest time made by	Type and (in brackets) Number of each type flying
			Mails	Goods				
Croydon-Paris ...	49	100	21	33	48	h. m. 2 45	D.H. 34 G-EBBS (2h. 0m.)	B. (4), D.H. 18 (2), D.H. 34 (3), G. (7), H.P. (1), H.P. W.8B (3), Sp. (3), V. (1), W. (1).
Paris-Croydon ...	49	112	9	36	43	3 10	D.H. 18 G-EAWX (2h. 16m.)	B. (3), D.H. 18 (2), D.H. 34 (3), G. (8), H.P. W.8B (3), Sp. (3), V. (1), W. (2).
Croydon-Brussels ...	8	21	2	5	8	2 12	D.H. 18 G-EAWX (1h. 58m.)	D.H. 18 (2), D.H. 34 (1), H.P. W.8B (1), V. (1), W. (1).
Brussels-Croydon ...	8	17	—	5	7	3 29	Vulcan G-EBBL (2h. 39m.)	D.H. 18 (2), D.H. 34 (1), V. (1), W. (1).
Croydon-Rotterdam-Amsterdam.	12	10	12	11	12	2 35	Fokker H-NABK (2h. 0m.)§	F. (7).
Amsterdam-Rotterdam-Croydon.	11	6	11	10	11	3 10	Fokker H-NABN (2h. 30m.)§	F. (7).
Totals for week ...	137	266	55	100	129			

* Not including "private" flights.

† Including certain journeys when stops were made *en route*.

‡ Including certain diverted journeys.

§ Rotterdam.

Av. = Avro. B. = Breguet. Br. = Bristol. Bt. = B.A.T. D.H.4 = De Havilland 4, D.H.9 (etc.).
F. = Fokker. Fa. = Farman F.50. G. = Goliath Farman. H.P. = Handley Page. M. = Martinsyde. N. = Nieuport.
P. = Potez. R. = Rumpler. Sa. = Salmson. Sp. = Spad. V. = Vickers Vimy, Vulcan, etc. W. = Westland.

The following is a list of firms running services between London and Paris, Brussels, etc., etc.:—Co. des Grandes Expresses Aériennes; Daimler Hire, Ltd.; Handley Page Transport, Ltd.; Instone Air Line; Koninklijke Luchtvaart Maatschappij; Messageries Aériennes; Syndicat National pour l'Étude des Transports Aériens; Co. Transaérienne.

Incidental Flying.—A busy week was spent testing machines for the Aircraft Disposal Co. by Maj. Foot, Capt. Stoken. Messrs. Courtney, Dickinson, Hayns and Shaw. Machines out were D.H. 9's, Bristol Fighter, Martinsyde and S.E. 5a's, some of which were flown to Brussels.

The Surrey Flying Services Avro also made a flight to Brussels and back on the 21st and 22nd.

THE LONDON AERO-MODELS ASSOCIATION (The Society of Model Aeronautical Engineers.)

COMPETITION for Camm Challenge Cup.—On account of the bad weather on Saturday last this Competition had to be postponed to Saturday next, July 1, on the same ground.

On Thursday next, the 29th inst., at 7.30 p.m., Mr. F. Handley Page has arranged for Mr. Reynolds, of the Handley Page Research Department, to read a paper before the members at Headquarters, 20, Great Windmill Street, Piccadilly, W. 1, the title of which will be "The Handley Page Slotted Wing," illustrated by lantern slides. Dr. A. P. Thurston, D.Sc., will preside.

"Flight Golf" Competition for FLIGHT Challenge Cup will be held on Wimbledon Common on Saturday, July 8, 1922, at 5 p.m. See last week's FLIGHT for full particulars.

On Thursday, July 6, a Committee Meeting will be held, when suggestions from members on future competitions will be discussed. Suggestions should be in the hands of the Hon. Secretary by Wednesday, July 5.

Mr. Felix Kelly's Challenge Cup for best duration in a single flight by compressed air driven model aeroplane, Wimbledon Common, Saturday, September 2, 1922, at 5 p.m. punctual.

Rules

The holder of the Cup for each year to be the entrant of the machine giving the best performance under the following conditions:—

- (1) Models to be limited to those driven by compressed air.
- (2) Minimum weight complete, 1 lb.
- (3) Winning flight minimum duration, 1 minute.
- (4) Minimum loading, 8 ozs., equals 1 sq. ft. for all horizontal surfaces. In the case of a dihedral or other angle, the area of such surfaces will be measured separately.
- (5) Machines to rise off the ground under their own power.
- (6) Flights to take place over reasonably level ground.
- (7) Machines at termination of flight to be in proper flying condition, and shall make a further flight rising off the ground, of at least 15 seconds to prove its proper flying condition is still unimpaired.
- (8) All air containers to be inflated by pumps operated by physical energy only.
- (9) At least three attempts shall be allowed.

The Cup is won outright by the entrant holding it for three consecutive years.



British Aviation Mission to Imperial Japanese Navy

MAJ. F. B. FOWLER, late Lieut.-Comdr. (Attd.) I.J.N. and Sqdn.-Comdr. R.N.A.S., is returning from Japan, arriving in England July 1. He was one of the first officers to join the British Aviation Mission in January, 1921, as Officer-in-Charge of Flying. For the last six months he has been second in command, but had to return for business reasons, and the loss of his services, which have been invaluable, is much regretted. Maj. Fowler will be glad to give any information in his power to the relatives of those still serving or any others interested, on application to his address, Belhurst, Hurstmonceux, Sussex.

Poison Gas—Aircraft—and a Warning by Marshal Foch

A TIMELY and very earnest warning comes from Marshal Foch not to neglect power in the air, in a preface which he has contributed to a French translation of "Chemical Warfare," by Major Victor Lefebure. There he emphasises that the ever-increasing capacity of the aeroplane to carry heavier weights will supply a fresh means of spreading poison gas by the aid of ever more powerful bombs and reaching armies and populations far to the rear. Marshal Foch continues:—

"Chemical warfare is thus able to produce more formidable results over greater expanses. On the other hand, it is beyond question that this extension finds a ready realisation in a country like Germany, which devotes itself in peace time to the wholesale manufacture of chemical products which, by a slight modification of the process of reaction, can be converted into war products."

Germany, at least partially deprived of her old method of fighting by a large military force, carefully instructed, regularly organised, and powerfully armed, may well turn to the new methods of attack which chemical warfare offer. "Chemical warfare ought therefore to enter into our calculations and our preparations for the future, if we wish to avoid a formidable surprise." The work of Major Lefebure the Marshal regards as giving an exact idea of the possibilities which chemical warfare opens for Germany today, and for that reason of the danger which menaces France and Great Britain.

Will our Government ever realise what lies before us should they neglect to continue "supremacy in the air"?

IMPORTS AND EXPORTS, 1921-1922

AEROPLANES, airships, balloons and parts thereof (not shown separately before 1910). For 1910 and 1911 figures see "FLIGHT" for January 25, 1912; for 1912 and 1913, see "FLIGHT" for January 17, 1914; for 1914, see "FLIGHT" for January 15, 1915; for 1915, see "FLIGHT" for January 13, 1916; for 1916, see "FLIGHT" for January 11, 1917; for 1917, see "FLIGHT" for January 24, 1918; for 1918, see "FLIGHT" for January 16, 1919; for 1919, see "FLIGHT" for January 22, 1920; for 1920, see "FLIGHT" for January 13, 1921; and for 1921, see "FLIGHT" for January 19, 1922.

	Imports		Exports		Re-Exportation	
	1921.	1922.	1921.	1922.	1921.	1922.
Jan. ...	£ 4,459	£ 1,152	£ 87,128	£ 76,552	£ 2,285	£ 23
Feb. ...	2,379	567	59,829	69,129	19	1,100
Mar. ...	14	1,471	118,199	166,607	1,565	100
April...	1,370	3,846	138,983	139,995	450	5,880
May ...	3,350	2,416	59,624	167,999	1,818	4,254
	11,572	9,452	463,763	620,282	6,137	11,357

PUBLICATIONS RECEIVED

British Standard Specification for Materials and Constructional Strength of Chemical Fire Extinguishers. No. 138, May 1922. The British Engineering Standards Association, 28, Victoria Street, London, S.W. 1. Price 1s. net, by post 1s. 2d.

Bulletin du Laboratoire Aerotechnique de Belgique. Le Mechanisme du Vol Naturel. By M. Boel. Le Ministre de la Defense Nationale, Brussels, Belgium.

Rugby Engineering Society: Proceedings for the Session 1919-20. Vol. XIV. The Rugby Engineering Society, care of British Thomson-Houston Co., Ltd., Rugby.

Catalogues

L.P.C. Piston Rings. The Light Production Co., Ltd., 60-66, Rochester Row, London, S.W. 1.

SKF Ball Bearing Transmission Accessories. The Skefko Ball Bearing Co., Ltd., Luton, Beds.



NEW COMPANY REGISTERED.

SIBLEYS (1922), LTD., 310-314, Clapham Road, Stockwell, S.W. 9.—Capital £5,000, in 41 shares. Builders of aeroplanes, airships and engines for flying machines, manufacturers of ordnance and munitions, etc. Permanent directors: J. Dennis and T. Dennis.

If you require anything pertaining to aviation, study "FLIGHT's" Buyers' Guide and Trade Directory, which appears in our advertisement pages each week (see pages iii and xiv).

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The Aircraft Engineer and Airships

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